

AMENDMENT ONE  
TO  
SUPPLEMENT NUMBER SIX

TO THE  
MEMORANDUM OF UNDERSTANDING  
ON A  
COOPERATIVE PROGRAM  
FOR A  
MEDIUM MULTIPLE LAUNCH ROCKET SYSTEM  
DATED 14 JULY 1979

BETWEEN  
THE SECRETARY OF STATE FOR DEFENCE OF THE UNITED KINGDOM OF GREAT  
BRITAIN AND NORTHERN IRELAND  
AND  
THE DEPARTMENT OF DEFENSE  
OF THE UNITED STATES OF AMERICA

FOR THE  
  
PRODUCTION AND SUPPORT PHASES  
OF THE  
FUTURE FIRE CONTROL SYSTEM (FFCS)

FOR MULTIPLE LAUNCH ROCKET SYSTEM (MLRS) LAUNCHER UPGRADES

## INTRODUCTION

The Secretary of State for Defence of the United Kingdom of Great Britain and Northern Ireland (UK) and the Department of Defense (DoD) of the United States of America (U.S.), hereinafter jointly referred to as the "Participants":

Recognizing the Memorandum Of Understanding (MOU) dated 14 July 1979 between the Governments of France (FR), Germany (GE), the UK and the U.S., known as the "Basic MOU", and the MOU thereto dated 12 July 1982 between the Governments of Italy (IT), FR, GE, the UK, and the U.S., known as the 'Italian Supplement' to the Basic MOU, concerning Italy's participation in the program, apply to the Multiple Launch Rocket System (MLRS) program;

Recognizing Supplement Number Six to the Memorandum Of Understanding (MOU) on a Cooperative Program for a Medium Multiple Launch Rocket System dated 14 July 1979 between the Secretary of State for Defence of the United Kingdom of Great Britain and Northern Ireland and the Department of Defense of the United States of America for the Development Project of the Future Fire Control System (FFCS) for Multiple Launch Rocket System (MLRS) Launcher Upgrades, known as the "Supplement Six";

Recognizing the Agreement Concerning Defence Cooperation Arrangements of 27 May 1993 between the Government of the U.S. and the Government of the UK will apply to this Memorandum of Understanding;

Recognizing the Governments of the Participants have entered into the U.S./UK Memorandum of Understanding relating to the Principles Governing Cooperation in Research and Development, Production, Procurement and Logistic Support of Defence Equipment of 13 December 1994 or any successor thereto;

Recognizing the applicability to this MOU of the Agreement between the Parties to the North Atlantic Treaty regarding Status of their Forces, done in London, UK on 19 June 1951;

Having a common interest in defense;

Recognizing the benefits to be obtained from standardization, rationalization, and interoperability of military equipments;

Desiring to improve their mutual conventional defense capabilities through the application of emerging technology;

Having the common goal to find the most cost-effective way of maintaining and improving the combat effectiveness of the MLRS M270 launchers;

Having a mutual need for the capability to fire the Guided MLRS (GMLRS) rocket and other munitions planned for use with MLRS launchers to satisfy common operational requirements;

Desire to enter into the common Production and Support Phases by amending the Supplement Number Six for the Development Project of the Future Fire Control System (FFCS) for Multiple Launch Rocket System (MLRS) launcher upgrades,

Have accordingly reached the following understandings:

The changes contained within this Amendment Number One apply only to the FFCS Production and Support Phases of the program, and do not apply to the Development Phase.

**I. Amend Section I, Definitions, by adding the following definitions:**

**CONTRACTOR SUPPORT PERSONNEL**

Persons specifically identified for support Contracts who provide administrative, managerial, scientific, or technical support services to a Participant under a Contract with that Participant that prohibits the persons from using information received under the Contract for any purpose other than those authorized under this MOU Supplement.

**GLOBAL POSITIONING SYSTEM/PRECISE POSITIONING SERVICE HOST APPLICATION EQUIPMENT (GPS/PPS HAE)**

Applications of electronic products which implement or contain any of the GPS/PPS security functions, i.e., selective ability (SA), anti-spoofing (A-S), and associated cryptography. GPS/PPS HAE receives and processes the PPS signals transmitted from the GPS satellites. GPS/PPS HAE are categorized as standalone, embedded, or integrated. Standalone HAE are self-contained GPS receivers, which are capable of being operated independently of other systems. Embedded HAE are GPS receiver modules or circuit card assemblies, which are intended to be integrated into other systems. Integrated HAE are enclosed multi-functional or multi-sensor systems, which contain embedded GPS receivers.

**PARTICIPANT**

A signatory to this MOU Supplement represented by its military and civilian personnel. Contractors and Contractor Support Personnel will not be representatives of a Participant under this MOU Supplement.

**II. Amend Section I, Definitions, by replacing the definitions for Contractor and Controlled Unclassified Information with the following:**

**CONTRACTOR**

Any entity awarded a Contract by a Participant's Contracting Agency. This includes subcontractors.

**CONTROLLED UNCLASSIFIED INFORMATION**

Unclassified Information to which access or distribution limitations have been applied in accordance with applicable national laws or regulations. Whether the information is provided or generated under this Supplement, the information will be marked to indicate its "in confidence" nature. U.S. export-controlled technical data will be marked as "International Traffic in Arms Regulations (ITAR)-Controlled". U.K. export-controlled technical data will be marked as "Export Control Act Controlled." It could include information which has been declassified but remains controlled.

## **Prospective Contractors.**

### **III. In accordance with Section II, Objectives, paragraph 2.3:**

A. The signature of this Amendment One by both Participants will authorize the implementation of the Production and Support Phases of the collaborative effort. The Participants' intentions are to produce and support the FFCS for use on Platforms.

B. The provisions of this MOU Supplement apply to the Production and Support Phases.

### **IV. Amend Section III, Scope of Work, to authorize the implementation of the Production and Support Phases of the collaborative effort by replacing para 3.3-3.4.3 with the following:**

3.3. The Production Phase, implemented by Amendment One of this MOU Supplement, will include the following specific tasks:

3.3.1. Award of one or more Contracts for production and installation of FFCS in accordance with the Estimated Procurement and Support Plan described in Annex A to Amendment One of this MOU Supplement.

3.3.2. Production and delivery of FFCS units, installation kits, diagnostic and maintenance equipment, training systems, spares/components, and supporting documentation to meet Participant requirements. Items for the UK MOD will, where possible, be purchased under the same contract as a U.S. DoD procurement of common or similar items in order to benefit jointly from economies of scale.

3.3.3. Monitor production, quality control and test FFCS production units.

3.3.4. Each Participant will be responsible for the installation of FFCS units into its national platforms and system check out.

3.4. The support phase, implemented by Amendment One of this MOU Supplement, will include the following specific tasks:

3.4.1. Maintain and update the FFCS design package, including the interface control documents as required, under an engineering services contract jointly funded by the Participants. The U.S. DoD will award the engineering services contract.

3.4.2. Investigate cost effective approaches to establish joint in-service support for the Platforms and maintain MFOM interoperability between the Participants.

**V. Amend Section IV, Management, to empower the Steering Committee to make Production and Support Phase management decisions by adding (or replacing) the following paragraphs:**

4.3.14. Approving changes to the Estimated Production and Support Plan (Annex A to Amendment One of this MOU Supplement).

4.3.15. Approving the Production and Support Phase Financial Management Procedures Document (FMPD) and any changes thereto.

**VI. Amend Section V, Financial Provisions, to authorize the implementation of the Production and Support Phase of the collaborative effort by replacing 5.3.2-5.3.2.3.2 with the following:**

5.3.2. The FFCS to be produced under Amendment One of this MOU Supplement will be the fire control system common to the U.S. and the UK.

5.3.2.1. The U.S. will fund (as reflected in Annex A to Amendment 1 of this MOU) the procurement of the FFCS as an upgrade to the HIMARS launcher in accordance with the Production and Support Phase FMPD.

5.3.2.2. The UK MOD will fund (as reflected in Annex A to Amendment 1 of this MOU) the procurement of FFCS units, installation kits, diagnostic/maintenance equipment, training systems, and spares/components to support the upgrade of existing UK MOD M270 launchers to the new launcher configuration and for integration into the UK Lightweight Mobile Artillery Weapon System, Rocket (LIMAWS(R)) in accordance with the Production and Support Phase FMPD.

5.3.2.3. The UK MOD will fund and carry out the installation of FFCS units into its M270 launchers and LIMAWS on a national basis in accordance with paragraph 3.3.4 of this MOU Supplement.

5.3.2.4. The costs of the engineering services to maintain and update the FFCS design will be shared by the Participants based upon their quantity of FFCS units owned, versus the total quantity of FFCS (or IFCS) units worldwide. A specific Engineering Services Cost Sharing Ratio (ESCSR) for each Fiscal Year will be established in the Estimated Procurement and Support Plan (Annex A to Amendment One of this MOU) and updated by the SC, if required, in the event there are significant changes in FFCS or IFCS requirements. The U.S. DoD and U.K. MoD will find their share of the ESCSR in accordance with the Production and Support Phase FMPD.

5.3.2.4.1. Each Third Party customer will be given the opportunity to receive the benefits of the cooperative engineering services. Should a Third Party choose to participate, they will fund a pro-rata share through separate arrangements with the U.S. Government based on their FFCS (or IFCS) quantities versus the total quantity of FFCS (or IFCS) units worldwide, and the impact on the Participants' contributions will be reflected in a modification to the Production and Support Phase FMPD.

5.3.2.4.2. Should a Participant or a Third Party choose not to participate, but subsequently decide that they need the benefits of the cooperative engineering services, they will have to retroactively pay an equitable share of past annual pro-rata costs in addition to their future pro-rata share through separate arrangements with the U.S. Government. The impact on the Participants' contributions will be reflected in a modification to the Production and Support Phase FMPD.

**VII. Amend Section VI, Contracting Provisions, by replacing paragraph 6.3 with the following:**

6.3. The Contracting Officer will negotiate to obtain the rights to use and disclose Project Information required by Section IX (Disclosure and Use of Project Information). The Contracting Officer will insert into prospective Contracts (and require its Contractors to insert in subcontracts) suitable provisions to satisfy the requirements of this Supplement, including Section IX (Disclosure and Use of Project Information), Section X (Controlled Unclassified Information), Section XII (Security), and Section XIII (Third Party Sales and Transfers), and Section XIX (Amendment, Termination, Entry into Effect, and Termination), including suitable provisions to ensure compliance with the Participants' respective export-control laws and implementing regulations. During the Contracting process, the Contracting Officer will advise prospective Contractors of their responsibility to immediately notify the Contracting Agency, before Contract award, if they are subject to any license or agreement that will restrict their freedom to disclose information or permit its use. The Contracting Officer will also advise prospective Contractors to employ their best efforts not to enter into any new agreement or arrangement that will result in restrictions.

**VIII. Amend Section VI, Contracting Provisions, by adding the following paragraphs, 6.8 and 6.9:**

6.8. The transfer of export-controlled information furnished by one Participant will be authorized by the Government of the furnishing Participant only to those Contractors of the other Participant who will limit the end use of the Information received for Defense Purposes as specified in Section IX (Disclosure and Use of Project Information) in accordance with this MOU Supplement. The Participants will establish legal arrangements with their Contractors to ensure that their Contractors do not retransfer or otherwise use export-controlled information for any purpose other than authorized under this MOU Supplement. Such legal arrangements will also provide that the Contractor will not retransfer the export-controlled information to another Contractor without the Government of the furnishing Participant's consent.

6.9. Any transfer between Participants of GPS/PPS HAE will be subject to the conditions of Annex B to this Amendment One.

**IX. Amend Section IX, Disclosure and Use of Project Information, by replacing Paragraph 9.1 with the following:**

**9.1. General**

Both Participants recognize that successful collaboration depends on full and prompt exchange of Information necessary for carrying out this Project. The Participants intend to acquire sufficient Information and rights to use such Information to enable the development, production, deployment, maintenance, and support of the upgraded M270 launcher and LIMAWS. The nature and amount of Information to be acquired will be consistent with the objectives stated in Section II (Objectives), Section III (Scope of Work), Section VI (Contracting Provisions) and the operational requirements set forth in Annex A (System Requirements). Transfer of such Information to Contractors will be consistent with each Participant's applicable respective export-control laws and regulations.

**X. Amend Section IX, Disclosure and Use of Project Information, by adding a new paragraph 9.3.1.4. as follows:**

9.3.1.4. Any disclosure or transfer of such Government Project Background Information to Contractors is consistent with the furnishing Participant's export-control laws and regulations.



**XI. Amend Section IX, Disclosure and Use of Project Information, by adding new paragraph 9.5.1.4 as follows:**

9.5.1.4. Any disclosure or transfer of such Contractor Project Background Information to Contractors is consistent with the furnishing Participant's export-control laws and regulations.

**XII. Amend Section XIII, Third Party Sales and Transfers, by replacing paragraphs 13.2.-13.2.2. with the following:**

13.2. The UK Participant will not sell, transfer title to, disclose, or transfer possession of Project Foreground Information, Project Equipment, or the whole or the part of any item produced from Project Foreground Information to any Third Party without the prior written consent of the U.S. Government. Furthermore, the UK Participant will not permit any such sale, disclosure, or transfer by others, including the owner of the item, without the prior written consent of the U.S. Government. The UK Participant recognizes that such sales, disclosures, or other transfers will not be authorized by the U.S. Government unless the government of the intended recipient consents in writing with the U.S. Government that it will:

13.2.1. Not retransfer, or permit the further retransfer of, any equipment or information provided; and

13.2.2. Use, or permit the use of, the equipment or information provided only for the purposes specified by the Participants.

**XIII. Amend Section XIX, Amendment, Termination, Entry into Effect, and Duration, by replacing paragraph 19.1 with the following:**

19.1. All activities of the Participants under this MOU Supplement will be carried out in accordance with their national laws and regulations, including their export-control laws and regulations. The responsibilities of the Participants will be subject to the availability of appropriated funds for such purposes.

**XIV This Amendment One shall extend the duration of Supplement Six until 14 July 2019.**

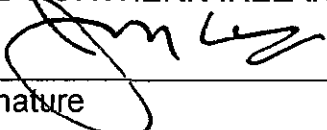
**XV. This Amendment One shall enter into effect upon the signature of the Authorized Representatives of both Participants.**

**XVI. All other provisions of the Supplement Six remain unchanged.**

The foregoing represents the understandings reached between the Participants on the matters referred to herein.

Signed in duplicate, in the English language by duly authorized representatives.

FOR THE SECRETARY OF STATE  
FOR DEFENCE OF THE UNITED  
KINGDOM OF GREAT BRITAIN  
AND NORTHERN IRELAND

  
\_\_\_\_\_  
Signature

J. H. LYLE  
\_\_\_\_\_  
Name

Director, Air Weapons  
and support  
\_\_\_\_\_  
Title

10 February 2005  
\_\_\_\_\_  
Date

Bristol  
\_\_\_\_\_  
Location

FOR THE DEPARTMENT OF  
DEFENSE OF THE UNITED  
STATES OF AMERICA

  
\_\_\_\_\_  
Signature

Mr. Alfred G. Volkman  
\_\_\_\_\_  
Name

Director, International Cooperation  
\_\_\_\_\_  
Title

February 4, 2005  
\_\_\_\_\_  
Date

Washington, D.C.  
\_\_\_\_\_  
Location

## ANNEX A

### ESTIMATED PROCUREMENT AND SUPPORT PLAN

1. The following tables indicate the estimated delivery profile costs for procurement and support requirements for the FFCS Program.
2. The figures in these tables are subject to change and do not represent a firm commitment on the part of either Participant. The Steering Committee will annually review these figures and update as necessary.
3. All figures in U.S. Dollars.
4. UK columns relate to UK estimated procurement costs within the U.S. Fiscal Year.

Table 1. Estimated procurement costs by U.S. Fiscal Year

Estimated procurement costs by U.S. Fiscal Year							
ITEM	UNIT COST	US - FY 05	UK - FY 05	US - FY 06	UK - FY 06	US - FY 07	UK - FY 07
FFCS Kit	642,000						
FFCS Units		37	13	41	7	51	7
FFCS Costs		23,754,000	8,346,000	26,322,000	4,494,000	32,742,000	4,494,000
Gov't Tech Support		712,620	346,680	789,660	346,680	982,260	346,680
Logistics Support			1,041,000		709,700		709,700
Maintenance of M270 in launcher pool	135,000 p/year		135,000		135,000		135,000
<b>TOTAL</b>		<b>24,466,620</b>	<b>9,898,680</b>	<b>27,111,660</b>	<b>5,685,380</b>	<b>33,724,260</b>	<b>5,685,380</b>

Table 2. Estimated support (engineering services) costs by US fiscal year.

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14
Total Qty to Date	331	394	470	528	588	653	717	780	843	901
US M270A1 to date	225	225	225	225	225	225	225	225	225	225
US HIMARS to date (USA/USMC)	93	149	218	276	336	401	465	528	591	649
US Total to date	318	374	443	501	561	626	690	753	816	874
% Eng Serv	96.08	94.92	94.26	94.89	95.41	95.87	96.23	96.54	96.80	97.00
Eng Serv (\$)	6,527,859	6,480,198	6,460,417	6,518,587	6,566,890	6,609,351	6,643,741	6,672,152	6,696,366	6,715,697
UK FFCs to date	13	20	27	27	27	27	27	27	27	27
% Eng Serv	3.92	5.08	5.74	5.11	4.59	4.13	3.77	3.46	3.20	3.00
Eng Serv (\$)	266,862	346,535	393,750	351,301	316,054	285,068	259,973	239,241	221,571	207,464
Total Eng Serv (\$)	6,794,721	6,826,733	6,854,167	6,869,888	6,882,944	6,894,419	6,903,714	6,911,393	6,917,937	6,923,161

## **ANNEX B**

### **TERMS AND CONDITIONS FOR THE PROCUREMENT OF NAVSTAR/GLOBAL POSITIONING SYSTEM (GPS)/PRECISE POSITIONING SERVICE (PPS) HOST APPLICATION EQUIPMENT (HAE)**

1. The UK Participant is authorized to purchase GPS HAE that have a security design approved by the GPS Joint Program Office as "UNCLASSIFIED/Controlled" when keyed.
2. The UK Participant shall not use or permit the use of any GPS/PPS HAE or related technical data, computer software, or components thereof, in any complete rocket system (including ballistic missiles, space launch vehicles, and sounding rockets) and unmanned air vehicle system (including cruise missile systems, target drones and reconnaissance drones) capable of delivering a payload larger than 500kg beyond a range of 300km without the prior written consent of the United States Government.
3. The UK Participant is not authorized to perform maintenance on GPS/PPS security devices (the PPS Security Module (PPS-SM), Auxiliary Output Chip (AOC, combined PPS-SM/AOC device, Selective Availability Anti-Spoofing Module (SAASM), or SAASM Code Block (SCB), equipment subassemblies containing SPS/PPS security devices, or related GPS/PPS software. If a malfunction of a GPS/PPS HAE is isolated to a subassembly containing a GPS/PPS security device, the faulty subassembly shall be removed, replaced, and returned to the U.S. Government for repair. If any GPS/PPS security device or any subassembly containing a GPS/PPS Security device is no longer needed or wanted, it shall be returned to the U.S. Government for destruction.
4. The UK Participant shall provide for the protection of GPS/PPS security devices from unauthorized access, theft, tampering, or loss.
5. The UK Participant is responsible for accountability by quantity for GPS/PPS HAE purchased. The UK Participant shall account for the GPS/PPS HAE by performing equipment inventories at least annually and whenever there is a change in personnel responsible for GPS/PPS HAE. Any incident involving unauthorized access to, or tampering with, theft, or loss of, GPS/PPS HAE shall be reported to the U.S. GPS Joint Program Office.
6. If the UK Participant decides to discontinue use of GPS/PPS equipment, the conditions of this Annex shall terminate with respect to GPS/PPS equipment and all GPS/PPS security devices shall be returned to the U.S. Government.

7. This Supplement Six does not transfer GPS/PPS design or manufacturing information, to include cryptographic software technology.